COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Informational Proceeding and Preparation of the 2005 Integrated Energy Policy Report	)	Docket No. 04-IEP-01-A
	)	
Re: Proposed Transportation Petroleum Fuels Price, Demand, and Supply Analysis	)	

ORIGINAL

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

MONDAY, NOVEMBER 29, 2004

9:10 A.M.

Reported by:
Peter Petty
Contract No. 150-04-002

COMMISSIONERS PRESENT

John Geesman, Presiding Member

James Boyd, Associate Member

Jackalyne Pfannenstiel, Commissioner

ADVISORS PRESENT

Michael Smith

STAFF and CONTRACTORS PRESENT

Leigh Stamets

Jim Page

Chris Kavalec

ALSO PRESENT

Dean Simeroth
California Air Resources Board

Lewison Lee Lem
California State Automobile Association

Mohsen Nazemi
South Coast Air Quality Management District

Catherine H. Reheis-Boyd
Western States Petroleum Association

Dominic Ferrari
Pacific Energy Partners

I N D E X

P R O C E E D I N G S

9:10 a.m.

PRESIDING MEMBER GEESMAN: This is one of the early sessions in our 2005 Integrated Energy Policy Report process. I'm John Geesman, the Presiding Member of the Commission's Integrated Energy Report Committee for 2005. To my left is Commissioner Jim Boyd, the Associate Member of the Integrated Energy Policy Report. And to his left is Commissioner Jackie Pfannenstiel.

Commissioner Boyd and Commissioner Pfannenstiel make up the Commission's Transportation Fuels Committee. And this proceeding is being conducted jointly between the two Committees.

The workshop seeks public comment on the Commission Staff's proposed evaluation of transportation and petroleum fuels price, demand and supply issues for our 2005 Energy Report.

This is the first of two workshops seeking comments on proposed analyses of transportation fuel issues for the 2005 Energy Report. The second workshop is scheduled for December 20th and will address analyses regarding

vehicle fuel efficiency and nonpetroleum transportation fuel issues.

The Energy Commission Staff is carrying out three tasks in analyzing transportation petroleum fuels for California. One, the long-term price forecast for crude oil and transportation fuels. Two, the demand forecast for transportation fuels. And three, an evaluation of the adequacy of the state's petroleum supply infrastructure.

Commission Staff will be making presentations on these three tasks to set the stage for questions, comments and suggestions from you. Copies of the notice which provides background, agenda and workshop questions are available in the back of the room. Copies are also available for the overview of the staff's proposed analysis and PowerPoint presentations. All of these items are also available on the Commission's website.

We hope your comments will include addressing the general and task-specific questions listed in the notice.

Why don't we get started with the staff presentation, then. Leigh, are you first up?

MR. STAMETS: No, Jim Page is going to start with the first discussion on the oil price forecast.

PRESIDING MEMBER GEESMAN: Let me interject. Before we do proceed, Mike Smith, Commissioner Boyd's Advisor, has joined us. Commissioner Boyd, did you have anything to say?

COMMISSIONER BOYD: Thank you, Commissioner Geesman. Maybe I'll put my hat on as the Chairman of the Transportation and Fuels Committee for a moment and just reflect back on this overall subject for the past several years.

I think everybody in this room probably remembers the price spike of '99/2000 winter. That was already five years ago. That event precipitated a lot of investigation, reviews, charges to this organization to produce reports and what-have-you. And really ushered in a half a decade of price volatility.

It's still with us today. We can still express concerns about supply, demand, price, infrastructure; and I think the staff has laid out a very thorough and detailed program for once again looking at this question.

This just reminds me of the criticality

of this issue to California. As many people have heard me say, this is one of the three legs of the energy stool, transportation fuel. And we really do need to get a handle on this issue.

And the Integrated Energy Policy Report has provided a real-time, full-time forum for addressing problems. And this is one of those problems that is just with us so far in perpetuity that really has to be looked at.

So I look forward to what the staff has to present, and I really look forward to participation by all stakeholders, hopefully, in providing data and making suggestions relative to this issue. So, thank you.

PRESIDING MEMBER GEESMAN: Commissioner Pfannenstiel.

COMMISSIONER PFANNENSTIEL: No remarks.

PRESIDING MEMBER GEESMAN: Okay. Excuse me for the delay, but Jim Page.

MR. PAGE: Thank you, Commissioner Geesman. Good morning. I'm here to present today staff's proposed crude oil, gasoline and diesel price forecasts.

Most of my presentation I'll be focusing on our approach and methods. But I'll also be

presenting results today. And hopefully getting your feedback.

The oil price forecast initiated a long series of analytical tasks, that's why I'm presenting actual preliminary results today. The world oil prices are inputs to natural gas and transportation fuel price forecasting. The fuel prices are, in turn, used as inputs to the vehicle attribute demand and policy analyses in transportation.

Among the challenges obviously, as Commissioner Boyd has referred to, is this great uncertainty in oils and fuels markets these days.

One additional direction we've been given this time around is for the oil price forecast to be more consistent with the natural gas price forecasting. However, the natural gas analysis uses a complex computer model and extensive data. And in contrast, on the oil side, we lack an inhouse world energy model.

Finally, the analyses in these forecasts are required to be what are called single-point forecasts; that is, for each year of the forecast we need a single average price for the 20-year horizon.

Staff's approach in the face of this uncertainty is to avoid a basecase; to not try to predict oil prices. But rather to develop planning or pricing scenarios that are diverged significantly from each other, but remain plausible. That test the boundaries of prices without going to extremes. Instead remaining at what we consider sustainable price levels.

We'll be using the U.S. Department of Energy oil price forecasts to quantify these scenarios, and also because they provide the required data and documentation needed for the natural gas price forecast.

To derive state fuel prices we'll be using historical data on world oil and state fuel prices, primarily from 2003 and 2004, because this is the period when MTBE-free phase 3 gasoline was the primary gasoline formulation used in the state.

The scenarios are pretty straightforward, quite simple what-ifs. First, what if recent 2004 oil and fuel prices become the norm for the future. Alternatively, what if these prices are not sustainable and prices decline to something nearer what we recall a longer term

historical average.

In today's presentation I will not be presenting a worst case scenario. Nothing like a severe depletion scenario or a Saudi Arabian meltdown or anything like that. However, we are reserving a placeholder, what we're calling an extra high oil price case. And our next presenter will show the framework for that in a little more detail.

I include in this graph, just as sort of a reminder, as we all know, that prices have reached $55. We've all read in the press that prices for oil have reached $55 a barrel this year. But it's important to remember that that's the peak price of a high quality crude oil, here, represented on the left by West Texas intermediate. And the vast majority of oils in the world are sold at much lower prices. And particularly if you average them over a year.

The index we will be using from here on is the refiner cost of imported crude oil. This is used by the Department of Energy's forecasting office in their forecast and has a long-time series associated with it. It's average prices, average fuel, average oils.

Included also on this graph a little more information on world oil demand growth over time. The points I think we want to take away from this are the price for 2004 is estimated between about $36 and $37 a barrel. And so when we talk about what if prices stay at those levels in the future, that's about what we're talking about.

And in contrast, prices for the last 18 years or so have, although varying widely, averaged around $24 a barrel. So we're talking about really a major step change in this first scenario compared to the historical record.

Another point to note on this quick chart is the high demand growth for 2004, 3.4 percent, very large jump in demand.

And the last point I think we should take away from this is the troughs of prices in the mid '90s and, in particular, 1998, which led to very low investment in finding and producing oil worldwide. That and the demand growth we're seeing now had squeezed excess world oil production capacity to very low levels historically.

COMMISSIONER BOYD: Jim, before you

leave this slide, I appreciate that in reading this you've predicated, of course, some of the estimates of the future price of oil on the work that DOE and their respective agencies have done.

Has anybody tried to assign a degree of confidence to the projection of the future price of a barrel of oil? In the face of all the uncertainty going on in the world today, I'm uncomfortable, but I have no basis other than just my gut, that this price is fairly speculative, at best.

But I didn't read deep behind that, and I didn't read the DOE analyses that you folks have relied on. Did they venture into any probabilities or degrees of confidence?

MR. PAGE: I'm not aware of any attempt to do that that way. Obviously things like resources, they assign probabilities to those kinds of things. But as we'll see, and I'll get into that shortly, the Department of Energy, their forecasts are based on expectations of what OPEC is going to do. In a sense, oil prices are managed, and so it's hard to, you know, assign probabilities to what OPEC might do, or what they might get away with.

But that's what --

COMMISSIONER BOYD: Okay, I'll wait till you get to that.

MR. PAGE: Okay.

COMMISSIONER BOYD: We'll worry about the greed factor then.

MR. PAGE: Aside from demand and investment, which I've talked about; low inventories, in particular oil and lately in heating oil, have pushed petroleum prices up, partly from the heating oil because of expectations of cold weather.

But also we've had this hurricane season, and Hurricane Ivan knocked out about a half a million barrels a day of oil production, which is slowly coming back online. And a lot of that was light sweet crude oil. So hence the volatility, especially in the NYMEX indexes.

Geopolitics, the usual things. The Iraq insurgency; last year's Venezuelan strike was very damaging to their industry and they're only slowly recovering. We've had strikes, on-again, off-again strikes in Nigeria; and even in Norway.

Also in Russia they're treating their largest oil producing company very roughly right

now. They may be going to dismember it, even.

Dollar devaluation is kind of a joker in this whole thing. We all know that the dollar is devalued against other currencies, and oil is denominated in dollars. It's a little unclear what the effects of that are, but some analysts believe it may be part of these recent oil price increases.

And tanker rates are definitely high as the world tanker fleet is pretty much fully utilized, especially the largest crude carriers.

One thing I didn't include here was the Administration's continued filling of the strategic petroleum reserve at about 140,000 barrels a day between the start of the Iraq war and actually till Hurricane Ivan hit.

And finally, as we all know in the state, numerous refinery outages and even pipeline outages have contributed their share in terms of instate fuel price increases.

Now, going to, we mentioned these DOE oil price projections. This is from a February annual outlook. And what staff is proposing essentially is for the first scenario, what if prices stay roughly where, you know, what we've

reached lately. To be using -- to propose using the DOE high oil price case for that scenario, to quantify that scenario. And the DOE reference case to quantify the second scenario, a return to more or less normal or long-term average prices.

However, we have a problem, a transition problem here. The DOE projected $25 a barrel oil in 2004, and we're, of course, $12 over that. So we'll have to affect a transition to accomplish this. And I'll go into that in a minute.

It might also be fairly asked, well, where did the DOE price forecast fit in, how do they compare with other price forecasts. And I think it's fair to say that they're pretty middle of the pack forecasts.

This is from the International Energy Agency's recent outlook. It just came out, so it might have more up-to-date comparisons. The DOE also does their own comparisons. And in those, the DOE price forecasts tend to be even in the upper half of those forecasts.

So, generally you can say that they're in the middle of the pack, or even slightly above comparable oil price forecasts. And, of course, I expect that to change as the new information, the

2004 prices get absorbed in these forecasting agencies.

COMMISSIONER PFANNENSTIEL: Excuse me --

MR. PAGE: Sure, go ahead.

COMMISSIONER PFANNENSTIEL: Before you leave that, would you go through in the legend there and explain who these other agencies are? The IEE Japan, I see the OPEC, then the CGES, who are they, please?

MR. PAGE: Yeah, the International Energy Agency is based in Europe.

COMMISSIONER PFANNENSTIEL: Right, got that.

MR. PAGE: The DOE, of course. The European Commission. Their prices are converted into dollars from Euros, so if you were to go back two years you'd probably see their price forecast almost identical to the DOE's. Except now with the dollar devaluation, and then the new conversion rates, theirs looks much higher.

The Institute of, I believe, Energy Economics in Japan. OPEC, of course. And then last is the Center for Global Energy Studies.

COMMISSIONER PFANNENSTIEL: Thank you.

PRESIDING MEMBER GEESMAN: Do you happen

to have the vintages of each of these reports?

MR. PAGE: No, I don't exactly. They're probably 2003, most of them, 2003. Maybe 2004.

PRESIDING MEMBER GEESMAN: Because 2004 was a fairly momentous year --

MR. PAGE: Yes, definitely.

PRESIDING MEMBER GEESMAN: -- in terms of price.

MR. PAGE: Absolutely.

PRESIDING MEMBER GEESMAN: And I believe you said that the DOE, EIA numbers are from February of 2004?

MR. PAGE: Yes. Unfortunately we're two months from the next one, or that would have been really useful. Saved a good bit of work in adaptation, you might say.

PRESIDING MEMBER GEESMAN: Would you expect those new numbers to make most of this analysis seem fairly stale?

MR. PAGE: Most of these forecasting, these agency forecasts tend to move pretty slowly. I expect some movement, but they're still using older data. I don't expect the 2004 data will even be fully available with this next forecast. So it just, it takes time.

And just a lot of numbers here. I don't know how much of this to really go into. But just for the high points, I did mention that the DOE forecasts are pretty much based on OPEC management of prices. They do that through their targeting their production.

So, given a high in the reference price cases that I showed you earlier, and given these economic or GDP growth rates, the following outputs come out of those cases.

And the high points really are world oil consumption goes down significantly in the high oil price case, as we might suspect. Non-OPEC production goes up in the high price case. And OPEC has to take the hit on their share of production to manage prices at the high level as compared to the reference case.

So, moving on now to our actual scenarios, which are really packages of pricing assumptions, -- and I apologize for the bland names of these scenarios.

But, constrained supply scenario uses the DOE high oil price projections from 2008 on. And in the short term to effect this transition I referred to, we'll be using the 2005 oil price

from the November Department of Energy short-term outlook. It's a sharp departure from even the previous month's outlook. And I'll show you that on the graph in a second.

The 2006 and '7 prices are simply interpolated between 2005 and the 2008 intersection with the long-term trend.

For the deriving the fuel prices, state fuel prices, I'm using fuel price margins from the 2003 and '4 data, the period of MTBE-free phase 3 gasoline predominately in use.

In the second scenario, business as usual, we're using the DOE reference case from 2010 on. And then the 2005 and '6 prices are based on calculated average 2004 NYMEX expectations for price declines for -- the 2004 expectations, looking to 2005 and 2006. Those, following the NYMEX price decline curve did not get us -- it started to flatten out after 2006. It flattened out so much that we were never going to get to the reference case if we followed it, or at least not till well into the like 2010 or 2020, I mean. So I interpolated from 2006 on to 2010 intersection.

PRESIDING MEMBER GEESMAN: Did that give

you any cause for concern?

MR. PAGE: Yes. The problem was the decision to use the -- because the natural gas unit -- was very valuable to the gas unit to have a model price forecast. And it was sort of a compromise. I felt we had to effect just to make that consistency between the two forecasts.

I didn't want to wait too long, though, to intersect with the DOE price forecast because then, you know, are we even using that forecast anymore.

So, there was definitely a lot of compromises and obviously having two months more, it would have been easier just to wait for the next DOE forecast and use that. See how they solved the problem. But we didn't have that luxury.

In this case the fuel price margins we used in earlier year because the logic on that being that what I felt, I think we all could recognize, was a pretty unusual number of refinery outages and pipeline problems in 2003 and '4.

If, in fact, they are more than we might expect in the long term, from year to year, we're generating margins that were fairly large. So, in

this case I decided to assume that those rates of refinery outages were unusual. And we included an earlier year where refineries operations were more stable.

And this is how these assumptions work out on these two scenarios. Obviously introducing the most recent DOE short-term outlook significantly changes the whole first three years of the constrained supply scenario. But it's certainly plausible. It's very -- not outside of the historic range of variability of prices at all.

And then in the business-as-usual case, even though prices declined, we're still seeing prices in 2005 and '6 that, with the exception of 2004, are the highest prices have been in 20 years.

Our transportation fuel price projections three major components here that we considered. First was crude price to the rack price margin. And in the constrained supply case you can see that the 59 cents for gasoline and 44 almost for diesel, using the 2003 and '4 data. And for business-as-usual we dropped about 6 cents for each of those fuels.

And this graph, I think, sort of explains that logic a little bit. Three different periods of time, '97/98 we were still using phase 2 RFG. This was before the state became a net importer of finished transportation fuels, specifically gasoline and diesel. Because we've always kind of been a net importer of jet.

The second set of columns shows crude to rack price margins after we became a net importer of gasoline and diesel. So we have a jump at that phase.

And then in 2003 and '4 with basically the only change being MTBE-free phase 3 gasoline, we had a 14 cent jump in these margins for gasoline, and 12 cents for diesel. And this seemed conceivably a large jump just to attribute to going to phase 3 MTBE-free gasoline.

COMMISSIONER BOYD: Particularly the diesel increase, which has nothing to do with --

MR. PAGE: Yes.

COMMISSIONER BOYD: -- with MTBE.

MR. PAGE: But I have to caveat all this. This going to -- becoming a net importer process is not cut and dried. It didn't just happen in one day, you know. Indefinite into the

indefinite future. It's a process of sort of on-again, off-again. At times you're definitely importing, you're definitely a net importer. And other times you don't need to import much. So the effect maybe is mitigated. So that's kind of a messy transition.

But, -- and so that might be part of the diesel. It was just a slower process of going to this net import status.

And finally, the rack to retail, same logic. It wasn't quite as much effect. These rack to retail margins are still fairly high for gasoline compared to historical numbers. Diesel has always been pretty stable.

And finally, the last component was the diesel sulfur reduction rules, which were settling for kind of a middle of the range of values of estimates that I was given by other staff of 5 cents a gallon for diesel.

And then finally with these components in the price of crude, you add on taxes, excise and sales taxes. You get a retail price.

The important thing to remember about the excise -- the taxation is the excise taxes, as they are now, are fixed nominal prices. So, the

assumption for this forecast was that excise taxes would be constant in real terms. That means they have to increase at the rate of inflation.

So that was an assumption. It's an important assumption because over the life of the forecast, if that assumption is not met, it could be as much as 12 cents a gallon for gasoline, and 14 for diesel that you'd have to take off the final prices.

And this graph shows the final regular gasoline and diesel price projections using these assumptions of oil prices.

COMMISSIONER BOYD: Jim, just out of curiosity, what are you assuming as an inflationary rate?

MR. PAGE: As an inflationary rate? These deflator index that comes out, I believe, I'm not sure -- Kay Sullivan in the Commission has, her unit generates a deflator index. I believe it's 2 percent or slightly under from here on out. It's very low, long term inflation.

COMMISSIONER BOYD: Thank you.

MR. SMITH: Jim, going back to the previous slide, the diesel sulfur reduction.

MR. PAGE: Yes.

MR. SMITH: That 5 cents per gallon. Is that the cost of production?

MR. PAGE: I'm not entirely sure. As I talked to other staff I found that there's a variety of estimates from like 2 cents to 8 cents. I believe that this is the cost of production, but I'm not entirely sure.

MR. SMITH: Thank you.

COMMISSIONER BOYD: Maybe later Mr. Simeroth can help us with this.

MR. PAGE: And that concludes my slides.

PRESIDING MEMBER GEESMAN: I take it we've reserved this period in our agenda for comments on the price forecast analysis.

Members of the audience, would you like to comment?

I guess I would like to get a better understanding of the linkage with the natural gas forecast. And I'm focused, I think, more on the mechanics than the actual output.

If I understand what you said they, the natural gas unit needs to have your forecast to provide oil price assumptions for their model?

MR. PAGE: Yes, as I understand it. And it's a limited understanding. They need gas

supply curves, gas demand resources, reserves; data that's well documented, easily accessible. It helps if they're familiar with the methodology. And in this case, they are.

So, there was a strong utility to using DOE forecasts in terms of that consistency.

PRESIDING MEMBER GEESMAN: Yeah, I can understand that. I guess where I tend to get off the bus is the strong utility for using outdated and purportedly stale and contradicted by NYMEX quotes DOE data.

MR. PAGE: Yeah.

PRESIDING MEMBER GEESMAN: And you suggested, I think, that there was a time urgency to doing that, rather than simply waiting for the February update of the DOE forecast.

MR. PAGE: There's a series of analytical tasks that need to occur. The contractor needs to do vehicle attribute projections, which takes awhile. He needs prices to do that.

I believe there's some urgency on the natural gas side, as well.

PRESIDING MEMBER GEESMAN: And, of course, we can hypothesize that it probably won't

make much difference to the longer term forecast levels, let's say 2010 and beyond. But there's always a great deal of public attention focused on the nearer years.

MR. PAGE: Right.

PRESIDING MEMBER GEESMAN: And agencies like ours and forecasts like yours tend to suffer credibility problems when the early years are so far off actual experience.

MR. PAGE: Absolutely.

PRESIDING MEMBER GEESMAN: How do you suggest we deal with that problem?

MR. PAGE: Well, I believe that in at least the higher case, the constrained supply case, we may have partially addressed that. The short-term outlook is for more price increases, sharp price increases.

As far as the business-as-usual, it was clearly compromised. Almost anything else is speculative anyway. I mean, so much of this, in the short term, with so much uncertainty in world oil markets, being able to project what kind of refinery operations will occur next year, whether we have refinery outages at the rates we've had in the last few years, well, that clearly changes

things.

If we hope for things to settle down a little bit, that'll make a large difference, just in the state fuel prices. Quite aside from the oil prices.

PRESIDING MEMBER GEESMAN: Oh, I understand that. I guess my larger concern is with the rationale for using such an obviously outdated DOE number. I can accept using the DOE forecast; I follow the rationale for doing that. But if we set ourselves on such a process that it takes so many months to turn the oceanliner, that we're doomed to using outdated DOE inputs, I'm not certain that the taxpayer gets much for his money in this process.

MR. PAGE: Well, yeah, but keep in mind that this case is a business-as-usual case, anyway, is what I'm calling the lowest sustainable price case. It's like a lower boundary. And the constrained supply is I'm considering a rough upper boundary if the world doesn't fall apart. Or if, in fact, the U.S. Geological Survey estimates of oil resources is approximately correct or in the ballpark, and not the theories of the depletionists, which are quite sharply at

odds, of course, with the Geological Survey.

And, again, we're sort of leaving open the placeholder for those perspectives with the extra-high price scenario.

PRESIDING MEMBER GEESMAN: What happens if, in February, DOE's new forecast comes out and they have a more elegant way of addressing these near-term years than our interpolation. And Commissioners suggest, well, we ought to use the best information available.

MR. PAGE: For me, personally, that would be totally acceptable. My only concern is the other downstream analytical tasks --

PRESIDING MEMBER GEESMAN: I understand that.

MR. PAGE: -- and their situation.

PRESIDING MEMBER GEESMAN: Write that down because we'll revisit this question in February.

MR. PAGE: Okay.

COMMISSIONER BOYD: I presume Kevin Kennedy's listening closely to this, because I find it interesting that Commissioner Geesman and I independently grabbed onto the same concern. Although I'm really not that surprised since we've

had a lot of internal discussions about this.

And that was the fact that perhaps you had to truncate your analysis, or change it some, or compromise it to stuff it into a can on an assembly line that may be moving more rapidly.

I did assume that you folks are more nimble than some other parts of our process and procedure. And come the February estimates, as Commissioner Geesman made reference, you could accommodate to them.

I am quite concerned that other units who need that input are constrained in different kinds of ways; some by process, which we've discussed internally quite a bit. And some by compromises that are being made because we've signed onto, you know, westwide analyses versus California analysis.

And so I think we said, and I'm looking right at Kevin right now, that should the Commissioners deem that data being used for some of these regional analyses was not -- that we weren't comfortable with it, let's just say, that our staff needs to be prepared to respond rapidly to a California analysis using different or better data and/or assumptions that may be decided upon

by the Commissioners as the approach to take.

So, anyway, we've had this discussion privately, and then we're having it publicly. And it is a concern the process forces people use hold stale data that really doesn't give you the kind of view you need. And I am hopeful and fairly confident that you folks, as I said, can be fairly nimble.

So we'll be back in February to talk to you internally if not externally about this. Thanks, Jim.

Dean, did you want to say anything about our assumptions on diesel prices or the cost of -- take your pick; there are microphones all over this room and very few people to use them, so.

MR. SIMEROTH: Coming back from the holidays, I'm still waking up.

(Laughter.)

COMMISSIONER BOYD: For the court reporter would you introduce yourself and your affiliation.

MR. SIMEROTH: I'm Dean Simeroth; I'm with the California Air Resources Board in the stationary source division. And I do the fields work for the Board.

Our estimate for cost of production for low sulfur diesel for California is about 3 cents a gallon, so we're in the ballpark in the 5. Whether it's 3 or 5, I don't think you could ever refine that difference in the prices.

Looking at your projections I think our view of it is, is that consumption in the state and the worldwide consumption are going to continue to go up faster and faster, particularly in the worldwide; it's soaking up some of the supplies we had enjoyed in the past and helped keep our prices more moderate. That's changed.

If California's economy continues to go back I think consumption is going to go up along with that. That seems about the only thing it tracks from our assessment.

And I tend to agree with the Commission, the 2004 data is telling us something, and we need to pay attention to that. And I don't think crude oil is going to go back to the $20 range; at least not in the next near term, or probably even in the next decade, if ever.

And you're seeing the Canadian tar sands being developed. And I think that's more a harbinger of the future than some of the other

things. And so the prices have to support things like that.

With that, usually work quite closely with your staff on most of the costs, so I don't really have any objections to what's been said.

COMMISSIONER BOYD: Thank you very much.

PRESIDING MEMBER GEESMAN: Any other comments on staff price forecast analysis? Sir.

DR. LEM: Good morning, Commissioners. My name is Lewis Lem. I'm with Triple A of Northern California, Nevada and Utah. And I just wanted to introduce myself, and also let you know that we're very interested in the work that's being done here.

I understand just from this presentation that this is about long-term price forecasts. But we would like to comment just on the price issue that we have been following the issue for the last couple years in particular. And so we are concerned about the volatility of prices in the short- and medium-term. And so certainly we appreciate any work that the Commission could do on this issue.

Thank you.

PRESIDING MEMBER GEESMAN: Thank you for

your comment. I think that issue will come up again and again and again, particularly as it relates to our infrastructure adequacy.

Other comments? Okay, why don't we move on then to the proposed fuels demand forecast.

MR. KAVALEC: Good morning; I am Chris Kavalec, and I will be doing the next, second and third presentations this morning. The first of which is transportation energy demand forecasts that we will be undertaking for 2005 through 2025 for the Integrated Energy Policy Report.

The purposes of the energy demand forecast. The first, of course, is energy planning for the state. Second, infrastructure assessment and supply adequacy. In other words, in order to assess the adequacy of our future supply of fuels, we need to know something about what demand is going to be.

Projected use of hybrid and diesel vehicles and their impact on fuel efficiency and fuel use. And the forecast will serve as a baseline for analysis of various policy options. For example, the fuel efficiency options and alternative fuel options that others will perform for the Integrated Energy Policy Report.

Projections include obviously onroad gasoline and diesel demand; transportation, electricity and natural gas from transit; commercial jet fuel coming from our aviation model; vehicle miles traveled by vehicle type. And when I say vehicle type that means heavy duty, light duty, medium duty. And within light duty we have various classes such as sport utility vehicles, pickup trucks and so on. Fuel efficiency by vehicle type.

The models we will be using include the transit, freight, aviation and CALCARS models. CALCARS is our forecasting tool for light duty vehicles. This model has recently been re-estimated with 2002 state survey data from a California vehicle survey of a few thousand households in the state.

The re-estimated model is designed to forecast gasoline, gasoline hybrid and diesel light duty vehicles. The main benefit of re-estimating the model, aside from updated coefficients, is that we now have the ability to project household ownership of hybrid and diesel light duty vehicles, which will become more and more important in the state in the future.

The model CALCARS projects vehicle ownership by household type and by vehicle class using projections of vehicle attributes such as performance and fuel efficiency and price.

We plan to do two forecasts with three scenarios in each forecast. The basecase and a higher fuel efficiency case which will be determined what the specifics are going to be for that case. For each of these forecasts, three scenarios, as Jim mentioned. Low fuel price, high fuel price and an extra high fuel price.

These forecasts are based on 2005 IEPR demographic and economic data from the demand office. We haven't gotten those forecasts yet so I can't share with you what the growth rates of population and income and so on are expected to be in the state.

Basecase fuel efficiency for new vehicles will be consistent with the Air Resources Board greenhouse gas light duty vehicle regulations. Although we may run an alternative case without the regulations just to see what the impact is on fuel use in California.

PRESIDING MEMBER GEESMAN: Given the threatened litigation, don't you have to do that?

MR. KAVALEC: I guess so. Now that you mention it, we do.

PRESIDING MEMBER GEESMAN: It would seem to me that if there is even a remote prospect that the litigation that's been threatened could be successful, analytically we're pretty well locked in, I think, to having to evaluate what the consequences of that would be.

MR. KAVALEC: Yeah. My point was this is what will be in the basecase; but we would be remiss in not doing an alternative scenario without the regulations.

Some of the issues we will be dealing with with regard to our forecasts. First, a comparison of projected demand under various fuel price scenarios, with projected instate supply to gauge the import requirements for the state.

In other words, demand for petroleum fuels is expected to continue to remain above the amount produced by refineries in the state for California. And the difference between that, obviously is imports.

Projected use of gasoline, hybrid and light duty diesel vehicles under various fuel price scenarios, i.e., what impact would very high

fuel prices have on hybrids and light duty diesel vehicle sales, vehicles that tend to have higher fuel efficiency.

The impact of increased light duty truck fuel economy standards. This comes from the NITSA requirement of an average increase in light duty truck fuel efficiency of 1.5 mpg by 2007. from 20.7 currently to 22.2 in 2007.

The natural increase in vehicle fuel economy or lack thereof. There's always the issue of what manufacturers will do in terms of vehicle fuel efficiency technology absent any regulations. There are always new technologies coming along -- for example, continuously variable transmission -- that at some point may become cost effective for manufacturers to install in new vehicles, thus improving fuel efficiency.

But on the other hand, as we have seen in recent years California fuel economy has been flat on average, or even declining. Although a lot of that has to do with increase in light duty truck sales. So this is something we have to sort out before we do the forecast.

Trends in purchase behavior. Particularly with respect to sport utility

vehicles, cross-utility vehicles, and the newer mega-vehicles like the Hummer. There are always trends that we can't capture in our models. For example, the changes in tastes and preferences that led to the big increases in purchases of new sport utility vehicles in the '80s and '90s. As opposed to the impact on sport utility vehicle sales of higher fuel prices that we can capture with our models.

So, in our last forecast what we did was to assume that the trend would continue for SUV sales for the next few years. In other words, SUVs, as a percentage of new vehicle sales, would continue to increase for the next few years.

However, that may be changing. In fact, Wards Automotive latest prediction says that sport utility vehicle sales may become flat. However, at the same time sales of cross-utility vehicles, which are also light duty trucks, but are more wagonlike and more like cars than the sport utility vehicles, sales of cross-utility vehicles may be increasing, as the older baby boom generation may be will want more comfortable riding vehicles.

COMMISSIONER PFANNENSTIEL: Excuse me,

was that based on any kind of analytical data, or is it just a speculative projection?

MR. KAVALEC: Well, I guess it's sort of both. They get a lot of information from talking to manufacturers and gauging what manufacturers' plans are and what new models they're going to offer in the next few years.

The model offerings of new sport utility vehicles are starting to decline, while the offerings for cross-utility vehicles are increasing. So I think that's mainly what it's based on.

COMMISSIONER PFANNENSTIEL: Thank you.

MR. KAVALEC: New buses, natural gas buses versus diesel buses. What are the plans of transit agencies. And any other issues that might come up in the next couple of months.

Oh, I guess that's the end. That's why I'm not getting anything else.

PRESIDING MEMBER GEESMAN: Chris, where do your demand elasticity assumptions come from?

MR. KAVALEC: That comes from, in the case of light duty vehicle fuel use, which is almost all of the fuel use for transportation in California, that comes from household level data,

how households respond to fuel prices. And that, in turn, comes from our survey data from 2002.

PRESIDING MEMBER GEESMAN: Okay, so that would be up to date as recently as 2002, then?

MR. KAVALEC: As recently as we can make it, yeah.

PRESIDING MEMBER GEESMAN: And what about your vehicle miles traveled assumptions?

MR. KAVALEC: Same thing. Household level data, what households tell us they've driven in the last year.

PRESIDING MEMBER GEESMAN: Thank you.

COMMISSIONER BOYD: Chris, on VMT, what numbers are we carrying now? A little bit below 2 percent growth a year, or am I missing that?

MR. KAVALEC: You mean recent history?

COMMISSIONER BOYD: Yeah, and what are you projecting?

MR. KAVALEC: What would you say, 2.5 percent, average for VMT growth?

MR. STAMETS: Projecting around 2, more like 2.5 percent.

MR. KAVALEC: Yeah. Recent years 2.5 percent. And I can't tell you what the projection is going to be since we haven't done the forecast

yet. I can just say a lot of that will depend on the economic demographic data that we get from -- that's the main driver of miles traveled.

COMMISSIONER BOYD: A decade, two decades ago, probably for two decades my recollection was that population was growing at about 2 percent. Vehicle registration was growing exactly the same, and VMT was always running at double that number.

And I have noticed the last few years it beginning to trail off, thank goodness. But that's a little lower than even I expected. So, maybe there is some promise there.

The only other comment I would make is as one who follows the automotive industry very close, just for the heck of it, a lot of these cross-over vehicles have some degrees of efficiency built into them fortunately that we haven't seen in the past.

So it's conceivable this price volatility that somebody called short-term mid term, which after five years now is becoming mid-term and may go long-term, is influencing the manufacturers and people in the purchase of their vehicles.

I think of a vehicle like the Dodge Magnum, which to those of us who are reasonably old, really looks like a '50s muscle car. Has a big hemi V8 in it. Nonetheless, it has technology that will kill half those cylinders electronically at any given point in time for fuel efficiency purposes. So I know Detroit can do it if they put themselves to it.

PRESIDING MEMBER GEESMAN: I think in the past both our demand elasticity assumptions and our VMT assumptions have been subject to some debate. And, in fact, I've been a bit skeptical of the assumptions we've used based on the vintage of surveys that provided the input.

But it seems to me that we've corrected that and plan to use what I would characterize as quite up to date survey data. So I would hope that those inclined or those who have been critical of our assumption in the past come forward in this process, over the course of the 2005 cycle, and offer any superior assumptions that they think we should be using.

MR. KAVALEC: Yeah, we think the survey data is pretty representative of what people are actually doing in the state in terms of travel

habits. But time will tell.

PRESIDING MEMBER GEESMAN: I'm not aware of any better way to get at these assumptions. So I would really place the burden on those who want to contest the assumptions that ultimately you use in your forecasts to provide something better if you, in fact, think there's anything better out there.

MR. SMITH: Chris, the CALCARS data, how comfortable are you that it captures the new hybrid offerings for light duty pickup trucks, SUVs, et cetera, that seems to be -- we seem to start seeing, or are seeing more and more of these days?

MR. KAVALEC: Well, there's two elements to that. One is what mix and models will be offered in the next few years. And that comes from a consultant, K.G. Duleep, who is an expert in engineering and trends in the auto industry.

So, on one side you have a projection of how many makes and models of hybrids will be available. On the other side you have how people will respond to those.

Now, in the survey, both for hybrids and diesels, these are relatively new technologies, so

we had to rely on stated preference survey. Meaning that people were offered hypothetical vehicles and asked to choose between them.

So, in that sense, you could criticize it because it's not based on actual purchase behavior. But we think it gives a pretty good representation of people's choice-making behavior.

PRESIDING MEMBER GEESMAN: We're at the comment stage now on our agenda. Are there any comments from members of the audience on the staff demand forecast analysis?

DR. LEM: I haven't followed all the specifics of the staff modeling, but I do serve on the transportation research boards, transportation and energy committee, so I follow the general research.

And I would just suggest that this question of the penetration rates for hybrids and the fuel efficiency impacts of those penetration rates, it's a new question. So it will be harder to determine certainly the travel patterns data. When we have more history we can calibrate that information.

But the question of hybrid penetration, and especially as we're seeing different types of

hybrids being provided into the market, it seems to me that consumers, what they do and what they choose, given the choices that they have, that's still an open question for us.

So I'd just encourage staff to look at that question very carefully with their consultants. Thank you.

PRESIDING MEMBER GEESMAN: When you say different types of hybrids, am I correct in assuming you're meaning it across different models within the fleet?

DR. LEM: Yes, and actually I'm concerned a little bit because if you go to the auto show which we just had in San Francisco, for example, you're finding that the hybrid concept is being used as a marketing device, as well.

So the consumer, I think, is going to have a harder time determining what they will get when they buy what's called a hybrid. And that's all sort of information that, you know, we'll have to wait and see what happens.

PRESIDING MEMBER GEESMAN: Thank you.

COMMISSIONER BOYD: A Silverado half-ton pickup is a little different than a Prius or a Honda, I would agree.

(Laughter.)

PRESIDING MEMBER GEESMAN: Okay, Chris. Mohsen, good to see you again.

MR. NAZEMI: 'Morning. Mohsen Nazemi with South Coast Air Quality Management District. I'm not sure if I have a comment, but I do have a question for staff.

In looking at the presentation today and listening to Chris talk about projections, with the exception of new buses, I'm wondering where does natural gas vehicle fit into the Energy Commission's analysis. I didn't hear any mention of that and I'm just wondering if that is being something that is going to be considered as part of this analysis, or is it something that we shouldn't look into the future to see any more of. I'd appreciate it if you can address that. Thank you.

MR. KAVALEC: Yeah, I shouldn't have made it sound as though we were only going to look at buses. We will also incorporate other types of vehicles, too. The point is that natural gas vehicles will not be part specifically of the modeling effort, since we don't have the capability in our models to project natural gas

vehicle purchases.

So it will be an offline analysis. But we'll talk to as many people as we can, and we will incorporate the latest information on natural gas vehicle trends into our forecast.

COMMISSIONER BOYD: I assumed that, and I've forgotten the date, staff, if you can help me, we're having another workshop on alternative fuels within a month or so if I'm not mistaken where I would expect more discussion of things like natural gas.

MR. KAVALEC: December 20th?

COMMISSIONER BOYD: That rings a bell, thank you.

PRESIDING MEMBER GEESMAN: Okay, should we move on then to the supply infrastructure adequacy evaluation?

MR. KAVALEC: Okay, fuel supply infrastructure assessment. And by fuel supply infrastructure I'm talking about things like size and number of pipelines, refinery capacities, adequacy of marine facilities and so on.

The purpose of the study is to identify potential problems and recommend a course of action for state policymakers.

A little bit of background. California has recently become a net importer of petroleum fuels as demand for California gasoline and diesel has exceeded the amount produced instate by California refiners.

This is going to continue; demand for gasoline and diesel will likely rise at a faster rate than supply produced in the state. And that means petroleum fuel imports will increase.

So the question we're asking, or one of the important questions is is our import and distribution structure ready for this new trend. In addition, constraints and bottlenecks in the infrastructure system, for example problems with feeder pipelines from the ports, or lack of storage facilities, may already be impeding timely delivery of additional product during refinery outages and other supply disruptions, which has contributed to the price spikes that we have seen in recent years.

And one thing I should add, we also want to get a sense of where refineries are going in terms of future production. How much production can we expect or increase in production from refineries in the future.

Outline for the analysis. First, we need to forecast for refinery expansion or what's called creep, and compare that to demand outlook, which I talked about earlier. Comparing demand to domestic supply to get a measure of the amount of imports we're going to require in our ports.

Identification of potential constraints and bottlenecks, both in the short and the long term. Physical, like size of pipelines and so on. And regulatory. In marine infrastructure, pipelines, refineries, through existing information that we already have and stakeholder interviews.

Right now we're in the process of interviewing refiners, terminal operators, government bodies and so on to gain information on current and potential future problems in our supply infrastructure.

PRESIDING MEMBER GEESMAN: How geographically specific is this information going to be that you present to us?

MR. KAVALEC: Well, basically it comes down to two ports. The Ports of Los Angeles and Long Beach and the Bay Area. So there will be specific problems that differ in each port.

PRESIDING MEMBER GEESMAN: So you'll break things down by northern and southern California?

MR. KAVALEC: Basically, yeah.

PRESIDING MEMBER GEESMAN: Will you divide either region into smaller areas than regionwide? I mean, for example, will you address physical constraints faced by a particular refinery?

MR. KAVALEC: I guess I'm not sure how to answer that. I mean we'll gain information on that. I'm not sure how much we can or will actually put down in a report, --

PRESIDING MEMBER GEESMAN: Okay.

MR. KAVALEC: -- but we will, obviously, be getting information specifically for refiners --

PRESIDING MEMBER GEESMAN: Okay.

MR. KAVALEC: -- and their specific problems. We also plan to do further analysis using a relatively complex model that's being developed for us. The petroleum infrastructure and market simulation model or PIMSM. This will further help us identify potential logjams in the infrastructure system in the state.

We are also doing an analysis of access to California markets by potential new entrants. In other words we want to find out if the market for imported fuels can be considered competitive, or are there undue burdens that are faced by independent traders and importers trying to gain access to the state petroleum market.

Finally, findings, conclusions and recommendations.

COMMISSIONER BOYD: Chris.

MR. KAVALEC: Yes.

COMMISSIONER BOYD: A question about other parts of the infrastructure. In the last couple of years, or maybe the last several years, but particularly the last couple years, even this year, there seem to be more and more problems with infrastructure within the state that moves petroleum products around.

And what I'm thinking of is what appears to me to be somewhat of an aging infrastructure in more ruptures, leaks, setting aside the errant backhoe operators, although there may be more infrastructure pressure there, too. We were going to take a look at that issue of the distribution, the intrastate distribution infrastructure from

the standpoint of it becoming more and more an aging infrastructure. An infrastructure that needs possibly some attention?

MR. KAVALEC: Yes, in fact that's going to be a very important part of the analysis to gauge what out there needs to be replaced, and when it needs to be replaced.

COMMISSIONER BOYD: Good, thank you.

MR. KAVALEC: A little bit about the interviews that we're conducting for our infrastructure assessment this month and in December.

Those being interviewed, as I mentioned already, refiners, pipeline storage and terminal operators, government bodies, independent importers, all the stakeholders in both northern and southern California.

Some preliminary information gained from the interviews. Some of the refiners are apparently pessimistic about the California business climate, and they seem to have a little bit of bias against investing in the state, compared to elsewhere in the world.

Some of the refiners also feel that local groups are a significant contributor to

delays in refinery and other infrastructure projects. Although local groups would say that they have good reason to be concerned.

Major investments may be required as California oil production continues to dwindle, and the refiners have to transition to sweet or light crude oils. California crude is a heavier version of crude.

As we import more and more in the state we're going to rely more on the sweet or light crude oils from the Middle East and elsewhere. It takes a slightly different technology or a revision in the technology to convert the sweeter, light crude oil imports into CARBOB, requiring investment on the part of refiners.

COMMISSIONER BOYD: Chris, again, a question. The assumption about more Middle East oil kind of rattles around in my head a little bit is as a concern. And the lack of -- and I agree with your, you know, the technical complexities of dealing with lighter, sweeter crudes.

But I think Mr. Simeroth mentioned something that I'm quite familiar with, and that's the Canadian tar sands and the oils that come from there, which I am told are very similar in

constituency to the kinds of crude oils that California processes at the present time.

Are we looking at that possibility? Is that part of the survey of supply, the potential for Canadian tar sands crude? Or do we see that going somewhere else?

MR. KAVALEC: Yes, that is part of it. But there's so much uncertainty now that it's hard to say or get anything concrete. Definitely the refiners know that there will be more imports for sweeter, light crude, but they really don't feel in a position to discuss the future of potential of tar sands, at least not with us.

COMMISSIONER BOYD: Okay, maybe we can get some more information on that.

MR. KAVALEC: We will get as much as we can collect.

COMMISSIONER BOYD: I think the Canadians would like to help us with that. I mean I just think of volatile parts of the world, or not so volatile parts of the world, parts of the world that are closer to us than not, and friends and foes.

So, in any event, something to look at. And non-OPEC members.

MR. KAVALEC: Okay. Also, refiners felt that the title 5 regulations, this is title 5 of the Clean Air Act that deals with permitting, may limit refinery creep; in other words, expansion projects in the refineries.

Storage costs for storing fuel have more than doubled in recent years. That's bad for imports that you have to store your fuels somewhere temporarily.

However, CARBOB is beginning to arrive from new locations in Europe and that's good for us; that's good for imports. The greater variety of sources that we have, the more options we have during a period of supply disruptions.

Policies in the southern California ports have led to very high utilization rates for marine facilities. This comes from an apparent inclination of bias in the port toward container cargoes rather than bulk cargoes.

And as I said, these are ongoing. We'll be collecting a lot more information in the next month. And following up these interviews with more phone calls.

But these are some tidbits that we've collected so far. And that concludes my

presentation, I believe. Yes.

PRESIDING MEMBER GEESMAN: Commissioner Pfannenstiel.

COMMISSIONER PFANNENSTIEL: Just I'm thinking about the series of interviews and clearly this would be the basis for essentially what we know about this part of the analysis.

Have you -- and I just have not seen this before, do you have a schedule, a matrix of how many refiners and how many pipelines? I mean, do you know in advance, or are you being moving according to what you're finding out or not finding out, and therefore the number of interviews will continue to grow or be changed according to what you're finding out?

MR. KAVALEC: Well, we do have a list of those we want to interview. And I can share that with you if you want me to send it to you. Who we end up interviewing depends mainly on who is available and who wants to talk to us.

So far we've had pretty good response. In terms of what happens as we learn new things, once these interviews are concluded there will be followup phone calls that are going to be based on what we've learned in the first round of

interviews.

COMMISSIONER PFANNENSTIEL: I see, but you are getting pretty good response so we wouldn't really expect there to be a bias in terms of who's willing to be interviewed and how that might affect the results?

MR. KAVALEC: There may be, but no one has shared that with us yet.

COMMISSIONER PFANNENSTIEL: Thank you.

PRESIDING MEMBER GEESMAN: Other comments? Sure.

MS. REHEIS-BOYD: Good morning. For the record my name is Cathy Reheis-Boyd representing the Western States Petroleum Association. And I'm basically here today to one, thank you for holding this workshop, and for bringing to bear some interesting information.

As with Mr. Simeroth at the Air Resources Board, we, too, took last week off so we are just seeing the information really for the first time. We will be putting considerable effort into looking at what you've presented; and certainly are very very interested in submitting our comments by your December 10th deadline.

And most importantly, I think, as we go

into the 2005 IEPR and into next year's interesting information coming out from your supply, demand and infrastructure work, which, as you know, we haven't been shy in talking with you about. We're very very interested in that piece of this portfolio.

But as we look forward to designing really California's energy future over the next 20 years together, we will be very interested in engaging with you and look very forward to that. Thank you.

PRESIDING MEMBER GEESMAN: Thank you.

MR. FERRARI: Good morning, Commissioners. Dominic Ferrari, Pacific Energy Partners. I've been here a couple of times last summer in particular. I couldn't agree more with Chris' comments on a couple of items, particularly the marine infrastructure problems in southern California.

Our company is right in the middle of building a new marine facility in southern California. If you had time today --

PRESIDING MEMBER GEESMAN: We do.

MR. FERRARI: -- I'd like to update you. I know you're busy people, but I wanted to give

you an update because we are right in the middle of a very important project for the state. So, whenever is convenient for you folks --

PRESIDING MEMBER GEESMAN: This would be a good time.

MR. FERRARI: Okay, thank you. I had a presentation. I don't know if it got put on CD or --

PRESIDING MEMBER GEESMAN: I believe it's been loaded. Looks to me like that.

(Pause.)

MR. FERRARI: Again, thank you, Commissioners. Again, I won't take too much of your time. I have a really quick presentation to update you on a very important project.

Again, my name's Dominic Ferrari; I'm the Vice President of Corporate Development for Pacific Energy.

Flipping to the next slide, real quick about our company. We are a public company traded on the New York Stock Exchange, PPX. We're a pipeline company. We operate pipelines in California, Rocky Mountains and also in Canada. We just moved up into Canada, and I'd like to talk about Canada, address one of the Commissioner's

questions on that.

We currently provide crude oil marine import infrastructure for the L.A. refineries right now today through an arrangement we have with the Shell Oil Company. They have a dock at the Port of Long Beach. And we have pipelines over to their dock.

We own a lot of tankage in that area where we receive vessels. We store crude oil imports in our tankage, and we have a wonderful pipeline system in southern California where we distribute crude to basically all refineries in southern California.

So we have a current operation right now. But what I really wanted to talk about today is our new project. And that's a new deep-water liquid terminal called Pier 400. Please stop me anytime, by the way, with questions.

As I said earlier, we did present this project to the CEC on June 28th and we appreciate that opportunity. We have been working with staff to keep them up to date on our project.

Basically Pier 400, the bottomline is it really does address this adequacy of supply infrastructure, for moving crude oil into L.A.

You know, a lot of the discussion has been about refined products. What we're trying to do is keep the crude there so that our refineries can at least run what they're running today.

As you all have mentioned in some of your other reports, we're running out of crude in the state, and we need more imports. And we just don't have enough facilities down in L.A. That's why we're building Pier 400.

Basically I just hit a couple of these points. Our sole intent is to keep our refineries adequately supplied with crude that they want to buy around the world.

And basically what is happening in L.A. and Long Beach is we have some facilities down there now. bp has a wonderful facility called 121, the Shell facility. There's a few others, but they're limited. They're just not big enough; there's not enough of them; they're older facilities.

And probably the most important thing with the exception of 121 is they have shallow water. You need deep water to really really put these refineries in a position to compete for crude oil around the world and be competitive.

I have a couple of slides here; really didn't want to spend a lot of time on these. I showed them to you last time, but it really affects some of the CEC's consultants have come up with these same curves. The whole point here is if you look at the gray bars, this is the projected crude oil imports into southern California. And you can see those bars just getting longer and longer as we go out in time.

And we've done several studies using some outside consultants, ourselves, to try to understand where it's going to come from. And as you can see, we believe a good portion of it is probably going to come from the Middle East, Canada, Latin America, West Africa.

This is our projection today. I'd like to make a comment about this slide, though. As we're developing this project and we're right in the middle of it right now, the refiners, what they really want is flexibility. Because at any one time there could be a crude oil in Ecuador or West Africa that could come on, and could be cheap, could be something that they could run They'll go out and buy a couple of million barrels, and they want flexibility. They don't

want to be tied down to any one part of the world and so they can take advantage of market opportunities.

So this is always going to change, where this oil's going to come from. Makes it a little bit difficult for us to design a project, but we can always work around that.

Real quick on Pier 400. We're now talking about designing a project that can move 250,000 barrels per day of crude, which is a sizeable facility. The water depth I've mentioned before is 81 feet. That is the deepest water in the United States with the exception of LOOP, which is Louisiana Offshore Oil Port.

This is a wonderful, wonderful resource for this state, because with 81 feet of water you can pretty well do anything you want in terms of size of vessel, type of vessel. And that's why this is so attractive.

The Port of L.A. where this is located had the insight to do this dredging and make this available. It's really the Port of L.A. that has sponsored us to this point.

We're a plant for tankage. Somebody mentioned tankage earlier. We need tankage to

support this operation. We're currently planning on 4 million barrels.

I mentioned earlier we are connected to all the refineries, so as far as building any new pipelines, major pipelines, we don't have to. They're all there.

I have a map that's coming up that I'd like to show you just in a minute, but probably one of the things that I like the most about this project is the design for the easy and safe navigation of marine vessels. And I think I'll go to this drawing because it's so important.

I don't know if you can see on the side there, but I'm going to step over here for a minute. Pier 400 is this big land mass here. That is a landfill that the Port of Los Angeles created over the last ten years. They've spent hundreds of millions of dollars dredging and filling. Most of that land mass is taken up by containers. It's almost completely rented out to the container companies now. They're doing a wonderful business.

But they did reserve some space for a marine facility, for a marine vessel, which is here. And, of course, they reserved a right-of-

way to build a large diameter pipeline, 42 inch, to get over to a central area where we'll have tankage. This area here. Then we'll have a delivery pipeline out to -- that delivery pipeline out goes to our anchor tenant, who is Valero Refinery. I'll talk about them in a minute. And then from there we distribute to everybody else.

But getting back to navigation, and it doesn't show, but Angel's Gate, when a vessel comes in, Angel's Gate is right about there. And the vessel basically just comes in through Angel's Gate and goes right up to the dock and stops. There's no maneuvering; there's no turning; there's no traffic in the inner harbor.

When you talk to people that are associated with the Coast Guard and the pilots, this is wonderful. And, again, the Port of L.A. designed this landfill specifically for this. So it's just a wonderful site.

Again, that's kind of the layout of the project. The Port of L.A., the Port of Long Beach is over there. I don't know how much -- I've got handouts and I can answer any questions about the layout later.

Getting back to the project, basically

the vessel emissions from the marine vessels are our biggest challenge in permitting. We're permitting right now. The vessels, as they come in, emit emissions and we have to manage that. So I'll spend a little time on that.

But the bottomline is we plan -- we're a professional company; we're a professional company; we're going to build a world class facility to the highest standards. The estimated cost for this is $130- to $160-million to build a facility like this.

I'll skip the math. I've just got a couple more slides. Again, I talked a little bit about the depth, but it's worth talking again. That with this 81 feet of water they can bring basically any size of vessel out there, Panamax, Aframax, and of course, the VLCCs. The Vs come from the Persian Gulf.

And if there's an opportunity for these refiners to buy Persian Gulf and keep their costs low, they're going to do it. And now we'll have a place to bring in a V and offload it. They don't have to lighter, they don't have to do anything. They can bring it right in here. This is a real advantage for these refining companies.

And, again, I talked about when you have flexibility in your facility you can take advantage of upsets in the world. Right now in Ecuador there's a lot of crude coming on; it's called Napo Crude. And they're trying to get into the market. That crude is selling very cheap. And if a refiner could get his hands on it and land it, they'll buy it. So it's those types of things that really make this business.

As far as our project, I just have a couple more slides. I talked earlier about Valero. Valero Refinery committed to move 50,000 barrels a day for 30 years. This is a financial commitment that's bankable. And we will use that to support our financing for our project.

We also are obviously having discussions with several of the other major oil companies that own refineries in the area. The only thing I can tell you about those negotiations is that they're very competitive and they all want long contracts, you know. I mean they basically want them. So we've very excited about the commercial support that we're getting right now. And we'll be able to announce more to you as things progress.

As far as initial volume based on -- and

this could change, but based on what I'm seeing right now, I think we'll be in about 150,000 to 180,000 barrels per day when we start up. And we hope to start up in 2007. That gives you kind of a feel for the initial volumes out there.

PRESIDING MEMBER GEESMAN: Your ultimate design capacity, though, is 250,000?

MR. FERRARI: Yes, it is.

PRESIDING MEMBER GEESMAN: And would you expect physically to have that capacity available at time of startup, or is that a later stage of construction?

MR. FERRARI: That's an excellent question, Commissioner. We'll have the 250 available at startup and we're permitting for 250.

PRESIDING MEMBER GEESMAN: Okay.

MR. FERRARI: As far as our current activities, we are right in the middle of permitting the project. Right now we're in our NEPA/CEQA process, which began on July 8th of this summer. You know, those processes take about 15 months. There's nothing you can really do about that; that's the timeline.

But we're getting a tremendous amount of cooperation with the Port of L.A., the Army Corps

of Engineers and things are moving along fine.

As far as what we've been doing, I talked a little bit earlier about vessel emissions. In order to permit a project like this you have to offset any new emissions that you put into the air. Some of the folks from the Air Board are here.

So we're out purchasing emission offset credits. We've spent $9 million to date just purchasing NOx and SOx and some of the credits that we'll have to offset. We have to offset those by 120 percent. That's part of the business.

We also plan to put in the equipment to mitigate the emissions from these vessels. And we've got several things going there. And I could talk, I don't want to get into that because that's a day's discussion, but I'd be happy to update you.

The point is we're very aware of what's going on. We're working this issue hard and we want to deal with it in a proper manner.

As far as our schedule is concerned we did issue a notice of preparation for the CEQA on June 14th. We expect our final EIR in July of

next year. Approval, once an EIR is out it needs to go to the L.A. City Council and several other approval bodies. We expect approval in September of '05. And then we would start construction shortly after that.

We would hope to complete this project in the February '07 timeframe, you know, with a startup in March. And as far as the Energy Commission is concerned, we appreciate being able to update you today. We do believe this is a major issue for California, and of course, for all the states that we supply product to.

As far as barriers to the project, we're going to get the normal barriers that any project like this will. We have a wonderful staff working on it and we just want to bring this project to your attention.

Finally, there is, when you build a project like this, there has to be great recognition for the local community. And we're doing that. The people of San Pedro, Wilmington that are affected by this project have a lot of input right now. And we're working that hard to make sure it's done properly.

So that's our project update.

PRESIDING MEMBER GEESMAN: Thank you very much. It sounds like you've made considerable progress since you briefed us in June. That's good to hear.

MR. FERRARI: We have, Commissioner. When I was here in June our commercial was still -- it was okay, but we didn't actually realize how much the refiners wanted this project. So it's one of those things, once you sign up the first customer, it starts coming.

And so we're just really delighted the way things are going commercially. Because without customers we couldn't do this. But I guess it goes to show you that this is really a needed project. And we're very happy to --

PRESIDING MEMBER GEESMAN: Well, I look forward to following your progress over the next year.

MR. FERRARI: Thank you very much.

PRESIDING MEMBER GEESMAN: Any other comments by members of the audience on supply infrastructure issues?

MR. NAZEMI: Good morning, once again. It's Mohsen Nazemi with South Coast Air Quality Management District. I want to thank staff and

commend them for the work they're doing in this phase of IEPR for 2005 update.

I also wanted to express our interest in participating and working with CEC Staff in development of the infrastructure aspect. And this is coming particularly from our last experience in 2003 report where we kind of found ourselves behind the eight ball, and not being involved very much, and having to come in and basically express our concern about some of the recommendations that staff made to the Commission and went forward.

So, to that end I would like to, in a public manner, express our interest to be involved. I heard that staff is conducting some interviews with stakeholders, and some of the government bodies. I'd like to remind staff we are a government body, very involved. And in fact Pacific Energy Partners' project is a project that we are very involved in permitting. We're working with Pacific Energy. I appreciate the presentation today.

And let you know that if they're interested in our input we're there and available. And we're very interested.

PRESIDING MEMBER GEESMAN: I appreciate your offer, Mohsen. And I will make certain that we do follow up on it, both this particular unit of our staff, and as you know, our environmental performance staff. Because we've got a separate effort underway evaluating the environmental impacts of petroleum infrastructure that I believe we've already been working closely with your staff on.

We're smarter than we were in 2003, so I think you can anticipate a closer level of cooperation. And we certainly welcome your input and your participation here today. You've been at a number of our workshops before; it's well appreciated.

MR. NAZEMI: Thank you.

PRESIDING MEMBER GEESMAN: Are there other comments? Is there any reason why we ought not to adjourn then?

We'll be adjourned. Thank you very much.

(Whereupon, at 10:53 a.m., the Committee Workshop was adjourned.)

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I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Committee Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

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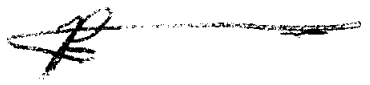

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